



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D3319-1
Job Sheet 188873



Part No: D3319-1

Part Name: Forward Wearplate



Job Qty: 12 pcs

Part Weight: 0 lbs

Job Created: 1/16/19

Due Date: 1/31/19

Type: Stock

Status: New

Job Tracking No:

Created By: Dara Macdonald

Description:

Priority: Medium

Note: IPP: B 05.10.14 Added step 9, dwg rev B KJ/EC IPP Rev:C Now on Waterjet 06-10-26 JLM IPP REV:D
17.10.25 AS PER DWG REV.D DD VERF.JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard Setup Hrs	Workcenter/Supplier		Sign-off
						Workcenter / Supplier	Lead Time	
100	Waterjet - Flow - 1	12 pcs	1/31/19	1/31/19	0.00 1.25	Waterjet - Flow		DC
110	QC 2	12 pcs	1/31/19	1/31/19	0.00 0.00	QC 2 - 1		DC
						QC 2 - 12		
						QC 2 - 14		
						QC 2 - 17		
						QC 2 - 19		
						QC 2 - 2		
						QC 2 - 20		
						QC 2 - 22		
						QC 2 - 23		
						QC 2 - 25		
						QC 2 - 32		
						QC 2 - 33		
						QC 2 - 35		
						QC 2 - 38		
						QC 2 - 39		
						QC 2 - 4		
						QC 2 - 40		
						QC 2 - 44		
						QC 2 - 45		
						QC 2 - 48		DC
						QC 2 - 49		
						QC 2 - 50		
						QC 2 - 51		
						QC 2 - 52		
						QC 2 - 54		
						QC 2 - 56		
						QC 2 - 57		
						QC 2 - 62		
						QC 2 - 63		
						QC 2 - 8		
120	QC 8	12 pcs	1/31/19	1/31/19	0.00 0.00	QC 8 - 12		
						QC 8 - 14		
						QC 8 - 17		
						QC 8 - 20		
						QC 8 - 25		
						QC 8 - 3		
						QC 8 - 32		
						QC 8 - 33		

140	Small Fab - Brake NC - B4B	12 pcs	1/31/19	0.00 0.87	QC 8 - 35	DAS
					QC 8 - 38	38
					QC 8 - 39	9-89
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	
					QC 8 - 58	
					QC 8 - 8	
					QC 8 - 9	
					QC 8 - 68	
					QC 8 - 67	
					QC 8 - 1 (A)	
					Small Fab - Brake - 1 - B4B	DAS
150	QC 5	12 pcs	1/31/19	0.00 0.00	Small Fab - Brake - 2 - B4B	30
					Small Fab - Brake - 3 - B4B	9-89
					QC 5 - 10	
					QC 5 - 12	
					QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	DAS
					QC 5 - 38	38
					QC 5 - 42	9-89
					QC 5 - 43	
					QC 5 - 49	
160	Automated Welding - B4B	12 pcs	1/31/19	0.00 3.08	QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	
					QC 5 - 9	
					QC 5 - 50	
					QC 5 - 30	
					Automated Welding - 1 - B4B	
					QC 10 - 10	
					QC 10 - 18	
					QC 10 - 24	
					QC 10 - 38	
					QC 10 - 43	
					QC 10 - 50	
					QC 10 - 58	
180	QC 5	12 pcs	1/31/19	0.00 0.00	QC 10 - 9	
					QC 5 - 10	
					QC 5 - 12	
					QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 38	
					QC 5 - 42	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
190	Spray Paint - 2 - B4B	12 pcs	1/31/19	0.00 0.00	QC 5 - 58	
					QC 5 - 68	
					QC 5 - 9	
					QC 5 - 50	
					QC 5 - 30	
					Spray Paint - 1 - B4B	
					Spray Paint - 2 - B4B	
					Spray Paint - 3 - B4B	
					Spray Paint - 4 - B4B	
					QC 3 - 10	
200	QC 3	12 pcs	1/31/19	0.00 0.00		

				QC 3 - 13	
				QC 3 - 15	
				QC 3 - 17	
				QC 3 - 18	
				QC 3 - 2	
				QC 3 - 26	
				QC 3 - 28	
				QC 3 - 3	
				QC 3 - 30	
				QC 3 - 34	
				QC 3 - 36	
				QC 3 - 38	
				QC 3 - 41	
				QC 3 - 51	
				QC 3 - 58	
				QC 3 - 59	
				QC 3 - 6	
				QC 3 - 68	DAG FEB 22 2019 68
				QC 3 - 9	9-88
210	Packaging 3-1 - Stock - B4B	12 pcs	1/31/19	0.00 0.00	Packaging 3 - 1 - B4B
					Packaging 3 - 2 - B4B
					Packaging 3 - 3 - B4B
					Packaging 3 - 4 - B4B
					Packaging 3 - 5 - B4B
					Packaging 3 - 6 - B4B
					Packaging 3 - 7 - B4B
					Packaging 3 - 8 - B4B
					Packaging 3 - 9 - B4B
					Packaging 3 - 10 - B4B
					Packaging 3 - 11 - B4B
					Packaging 3 - 12 - B4B
					Packaging 3 - 13 - B4B
					Packaging 3 - 14 - B4B
					Packaging 3 - 15 - B4B
					Packaging 3 - 16 - B4B
					Packaging 3 - 17 - B4B
					Packaging 3 - 18 - B4B
					Packaging 3 - 19 - B4B
					Packaging 3 - 20 - B4B
					Packaging 3 - 21 - B4B
					Packaging 3 - 22 - B4B
					Packaging 3 - 23 - B4B
					Packaging 3 - 24 - B4B
					Packaging 3 - 25 - B4B
					Packaging 3 - 26 - B4B
					Packaging 3 - 27 - B4B
					Packaging 3 - 28 - B4B
					Packaging 3 - 29 - B4B
					Packaging 3 - 30 - B4B
					Packaging 3 - 31 - B4B
					Packaging 3 - 32 - B4B
					Packaging 3 - 33 - B4B
					Packaging 3 - 34 - B4B
					Packaging 3 - 35 - B4B
					Packaging 3 - 36 - B4B
220	QC 21 - SA	12 pcs	1/31/19	0.00 0.00	QC 21 - SA - 21
					QC 21 - SA - 70
Part Op 100 - 1-Cut as per Dwg D3319 Dwg Rev: _____ Prog Rev: _____ 2-Debur if necessary Descriptions: 110 - (QC2- Inspect parts off machine FAI/FAIB) 120 - QC8- Inspect parts - second check) 140 - (Form as per dwg) 1- Form using DT8326 & DT8261 as per Dwg D3319Rev: _____ 2- Form flat on press using DT8776 block 150 - QC5- Inspect part completeness to step on W/O) 160 - 8259 HARDCOAT B: <u>138901</u> 170 - (QC10- Inspect visual per QSI004- ground welds) 180 - (QC5- Inspect part completeness to step on W/O) 190 - Spray Paint / NDT Room) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURE COATING AS PER DWG NOTE 9 SHEET ONE. BATCH: <u>5147896</u> 200 - (QC3- Inspect Part Finish) 210 - (Identify as per dwg & Stock Location: _____)Identify on inside surface using a permanent fine point marker with the following: TCCA-PDA, Dart Aerospace Ltd. P/N: D3319-1, B/N: BXXXXX For Product Eligibility see PDA05-18 and					

Stock Location: _____
220 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M304S18GA	304/316 .050 Sheet	7.5360 sf (.628 ea)	100-Waterjet - Flow - 1	

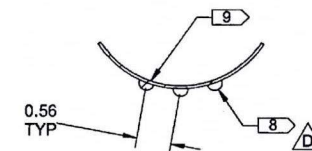
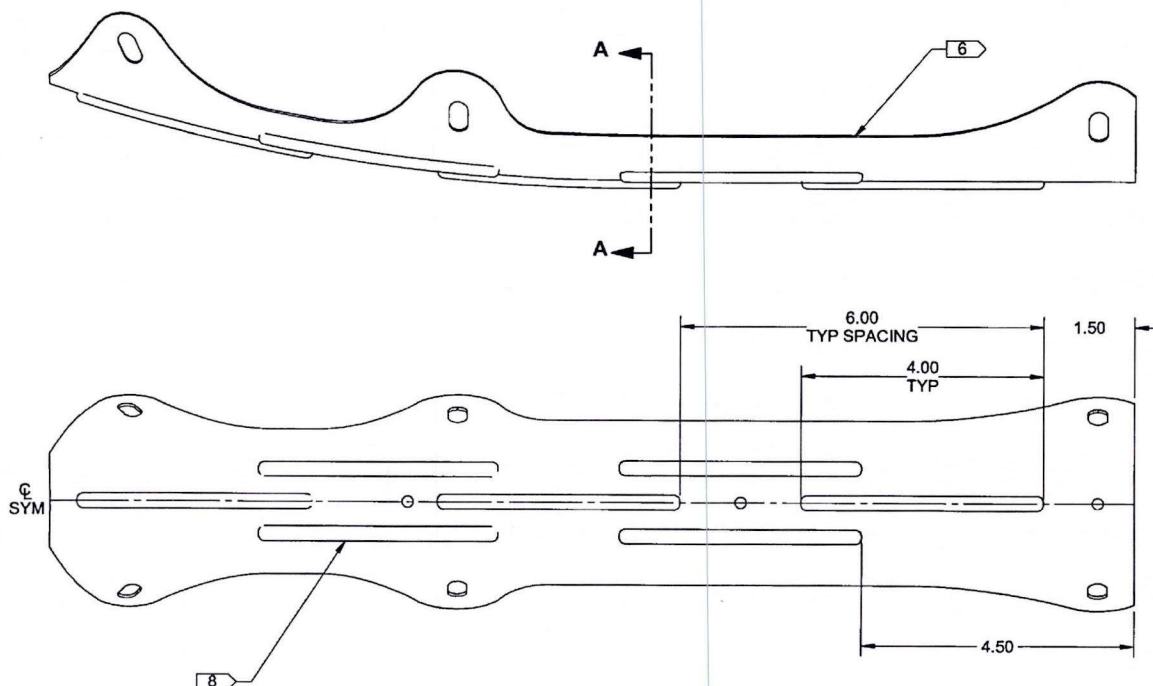
Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Waterjet - Flow - 1	M304S18GA	8	168	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Wearplate	4.980inches ± 0.030	5.010 4.950		
2	Wearplate	1.600inches ± 0.010	1.610 1.590		
3	Wearplate	2.660inches ± 0.010	2.670 2.650		
4	Wearplate	3.190inches ± 0.010	3.200 3.180		
5	Wearplate	3.563inches ± 0.010	3.573 3.553		
6	Wearplate	4.710inches ± 0.030	4.740 4.680		
7	Wearplate	0.600inches ± 0.030	0.630 0.570		
8	Wearplate	10.576inches ± 0.010	10.586 10.566		
9	Wearplate	11.942inches ± 0.010	11.952 11.932		
10	Wearplate	18.090inches ± 0.030	18.120 18.060		
11	Wearplate	0.316inches + 0.006 - 0.001	0.322 0.315		
12	Wearplate	0.546inches ± 0.010	0.556 0.536		
13	Wearplate	0.316inches + 0.006 - 0.001	0.322 0.315		
14	Wearplate	0.670inches ± 0.010	0.680 0.660		
15	Wearplate	0.190inches + 0.005 - 0.001	0.195 0.189		
16	Wearplate	3.815inches ± 0.010	3.825 3.805		
17	Wearplate	16.100inches ± 0.010	16.110 16.090		

Plex 1/16/19 11:08 AM Dart.Macdonald.Dara



SECTION A-A

D3319-1 WEARPLATE
MAKE FROM D3319-1BND

RELEASED

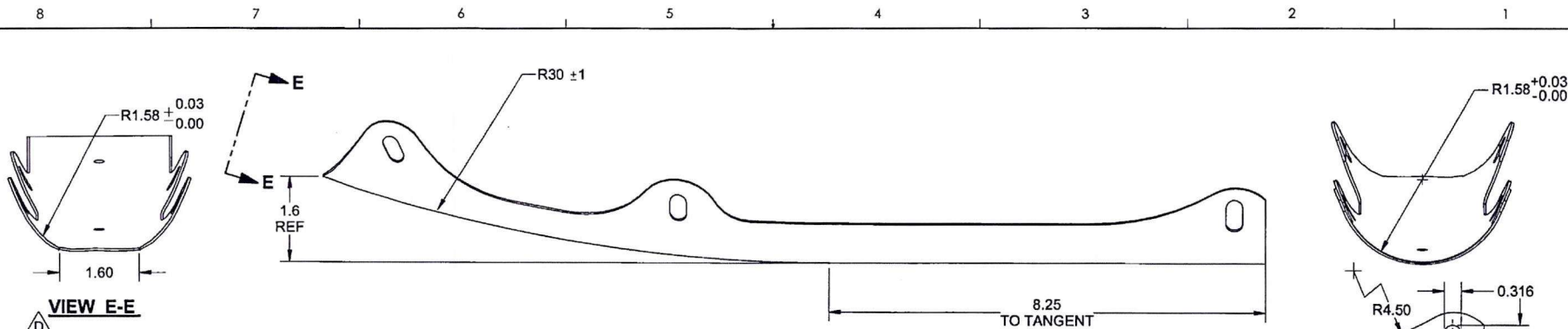
2017 AUG 10
EN 17.44

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3319-1" PER QSI 044 6.1
- 7) WEIGHT: 1.09 lbs
- 8) BUILDUP HARD SURFACING 0.06 TO 0.13 THICK USING 8259 ROD PER QSI 004 SECTION 4.5 (AUTOMATED WELDING) OR BUILDUP HARD SURFACING 0.06 TO 0.13 THICK USING 2059B ROD PER QSI 004 SECTION 4.1 (MANUAL WELDING)
- 9) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING 0.020-0.040 THICK, PER DART QSI 005 4.9

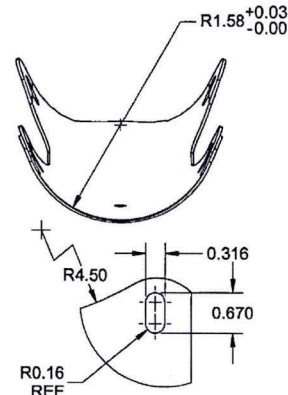
D	REVISE DRAWING TO SOLIDWORKS FORMAT, UPDATE NOTES, ADD ROBOTIC WELDING PROCESS, UPDATE TOLERANCES TO REFLECT INSPECTION CAPABILITY, CHANGE DRAIN HOLE LOCATION D3319-1, 12.00 WAS 12.600 (ZN B6-2), CHANGE WELD, PATTERN AND ADD MISSING DRAIN HOLES D3319-1/3, CHANGE MTL TO SS 304/316, ADDED D3319-XBND, SECTION VIEW F-F, AND UPDATED VIEW E-E ADDED DETAIL D, I, P	SAD	17.05.09
C	UPDATE TO CURRENT STANDARDS IAW QSI 043; CLOSED AFTMOST HOLE OF -3/51-7 (REF DETAIL G) SEE NCR 12-547	MB	12.03.13
B	WIDEN HOLES, REDUCE WIDTH OF -3/51-7	PH	05.06.06
A	NEW ISSUE	PH	04.09.24
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	SAD		
CHECKED	AJS	DRAWING NO.	REV. D
MFG. APPR.	DP	D3319	SHEET 1 OF 8
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	WEARPLATE	NTS
DATE	17.05.09	COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

APPROVED

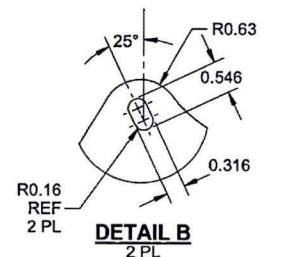


VIEW E-E

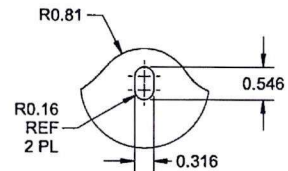
D3319-1BND WEARPLATE
MAKE FROM D3319-1F



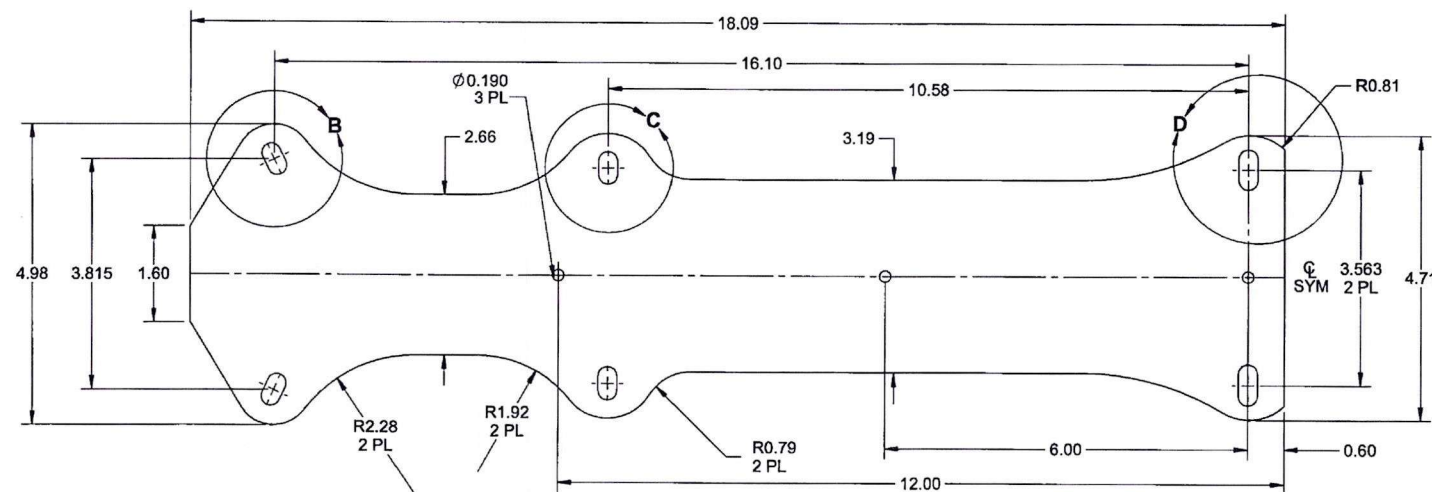
DETAIL D
2 PL



DETAIL B
2 PL



DETAIL C
2 PL



D3319-1F WEARPLATE
FLAT PATTERN

NOTES:

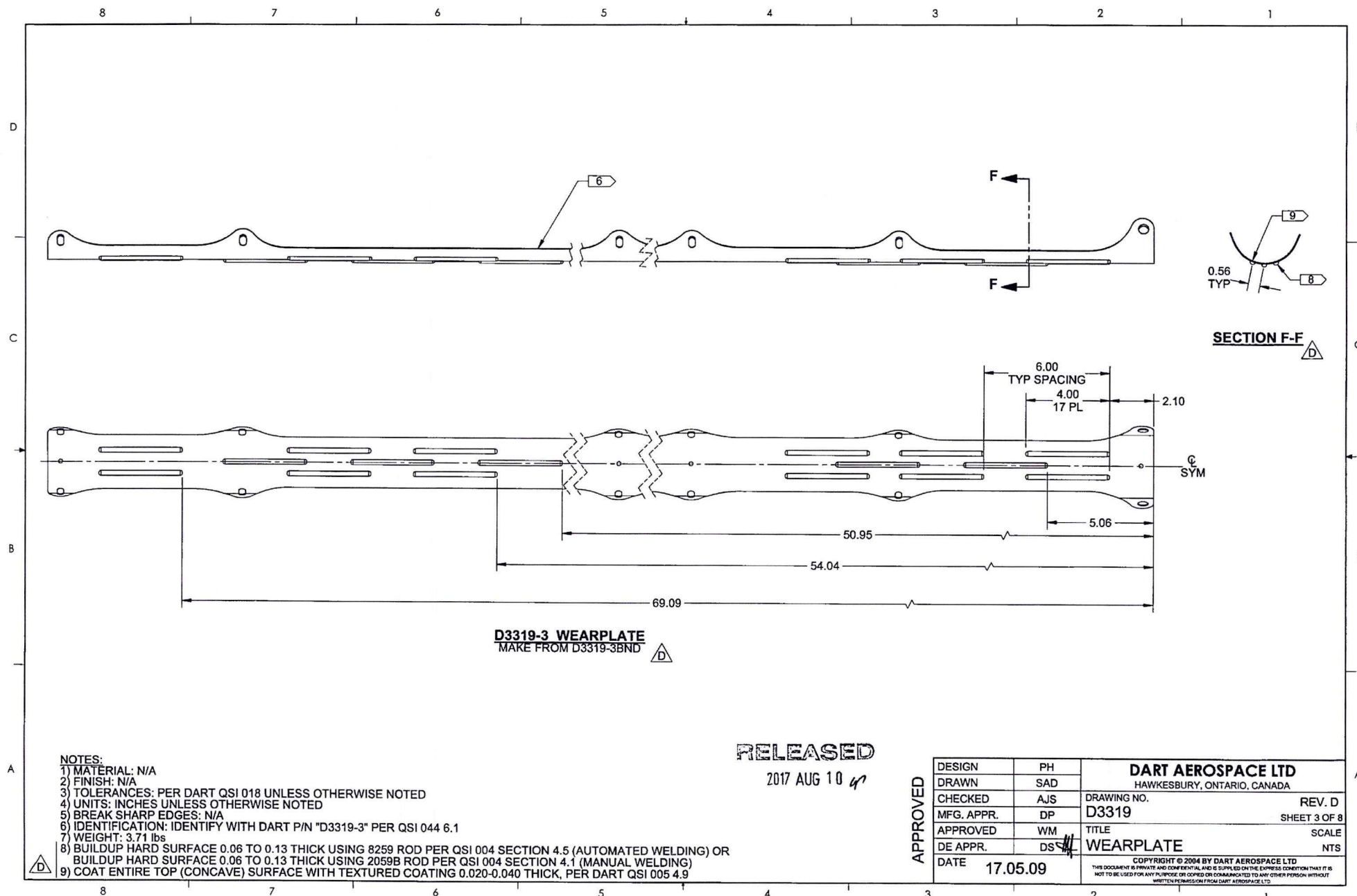
- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED, 18 GAUGE (0.048 THICK)
PER MIL-S-5059 OR AMS 5513 (304)
OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
REF DART SPEC M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.84 lbs
- 8) FOR NON-DIMENSIONED FEATURES, REFER TO CAD FILE D3319-1F-REV.D.XF

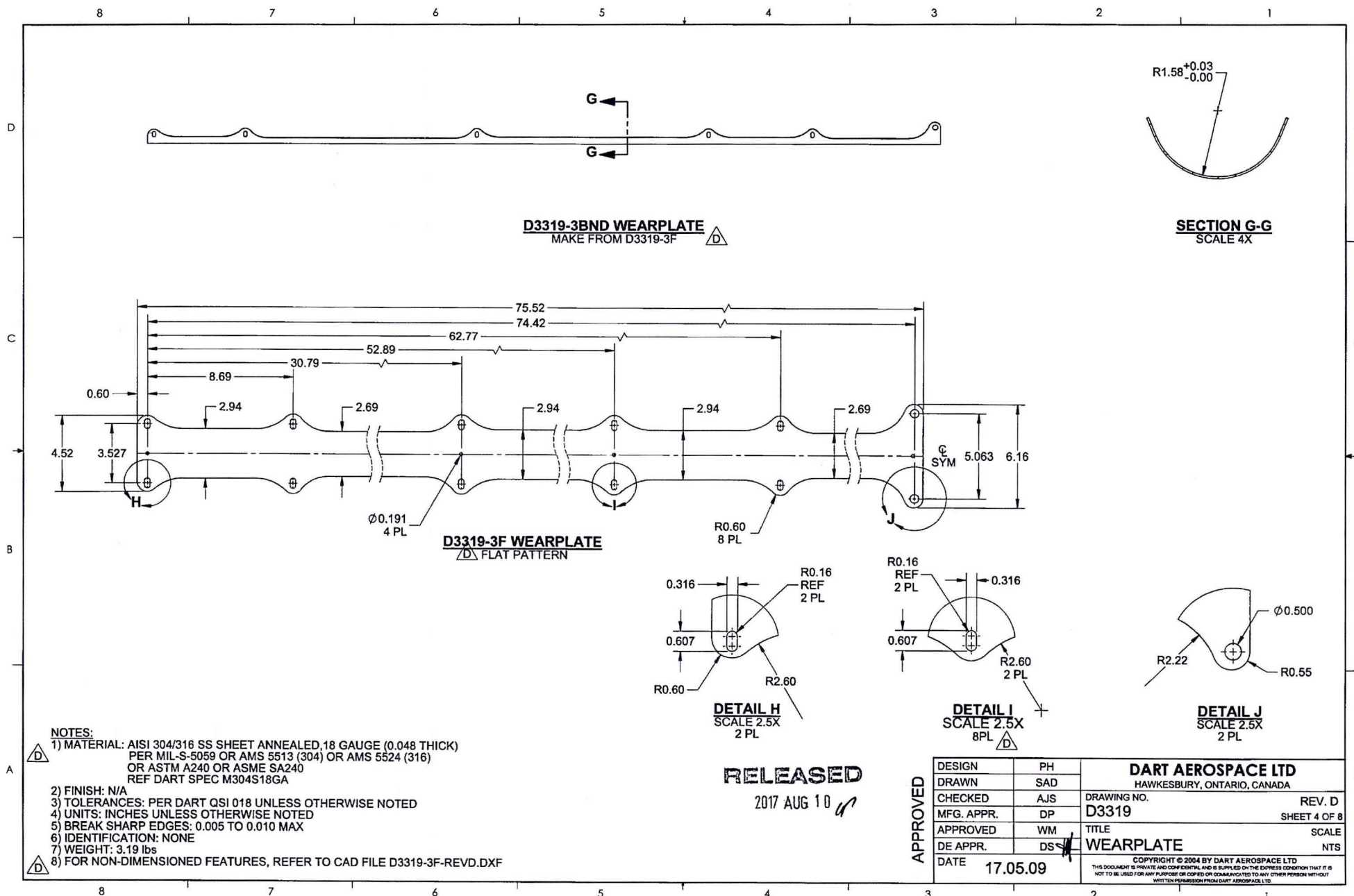
RELEASED
2017 AUG 10

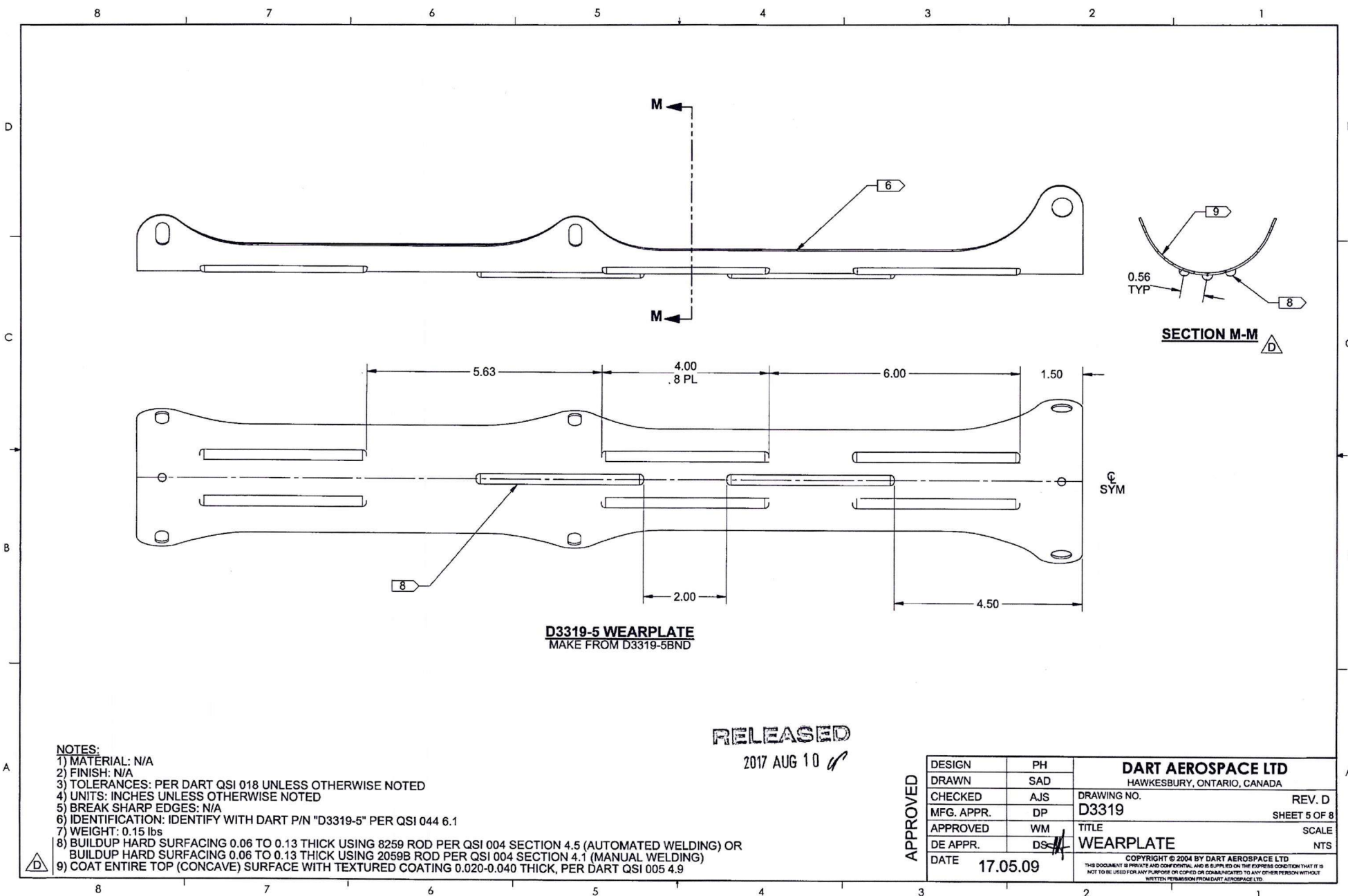
APPROVED

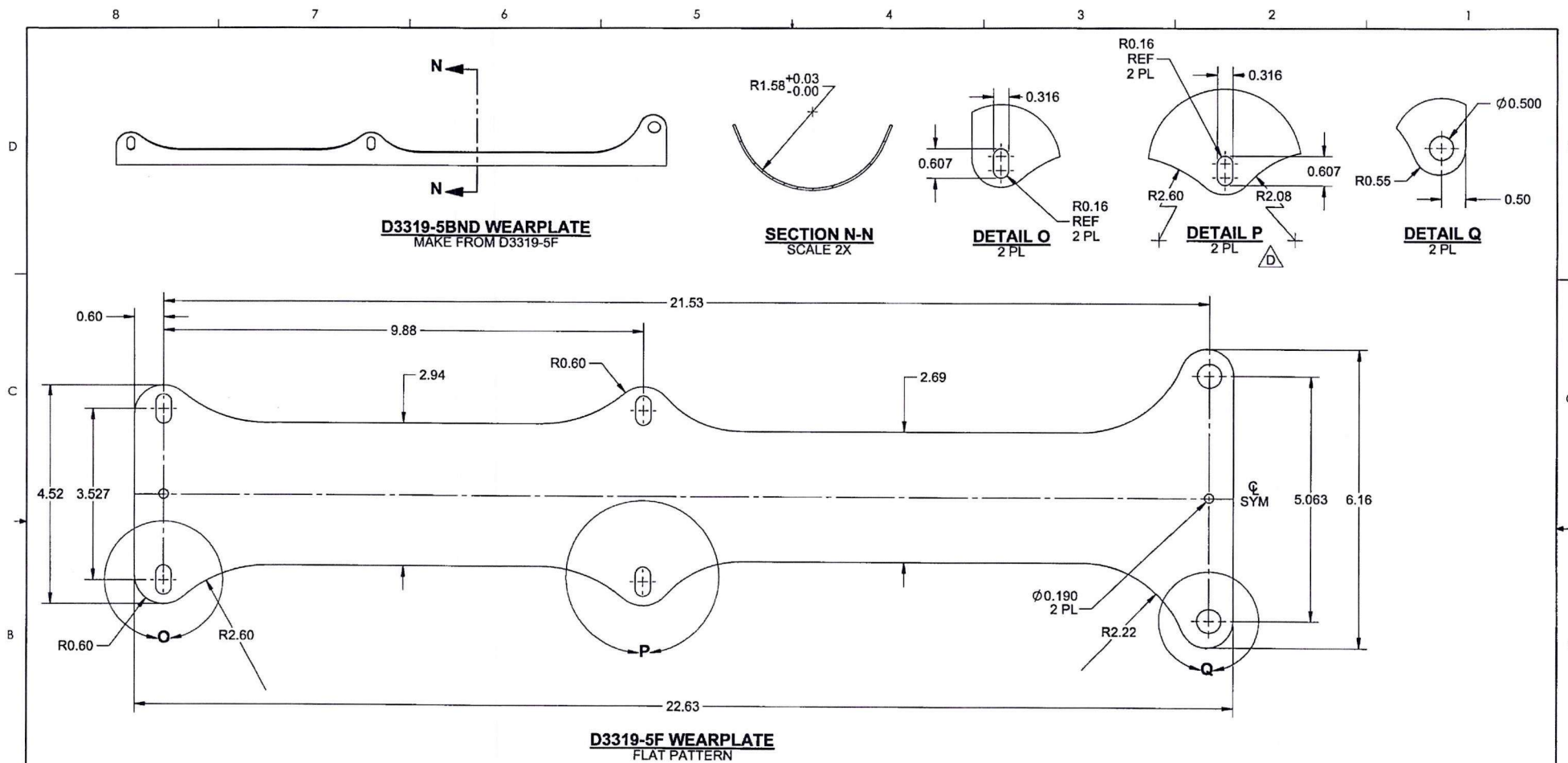
DESIGN	PH
DRAWN	SAD
CHECKED	AJS
MFG. APPR.	DP
APPROVED	WM
DE APPR.	DS
DATE	17.05.09

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D3319	REV. D SHEET 2 OF 8
TITLE WEARPLATE	SCALE NTS
COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	









NOTES:

1) MATERIAL: AISI 304/316 SS SHEET ANNEALED, 18 GAUGE (0.048 THICK)
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR
ASTM A240 OR ASME SA240 18 GAUGE (0.048 THICK)
REF DART SPEC M304S18GA

2) FINISH: NONE

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: NONE

7) WEIGHT: 0.15 lbs

8) FOR NON-DIMENSIONED FEATURES, REFER TO CAD FILE D3319-5F-REV.DXIF

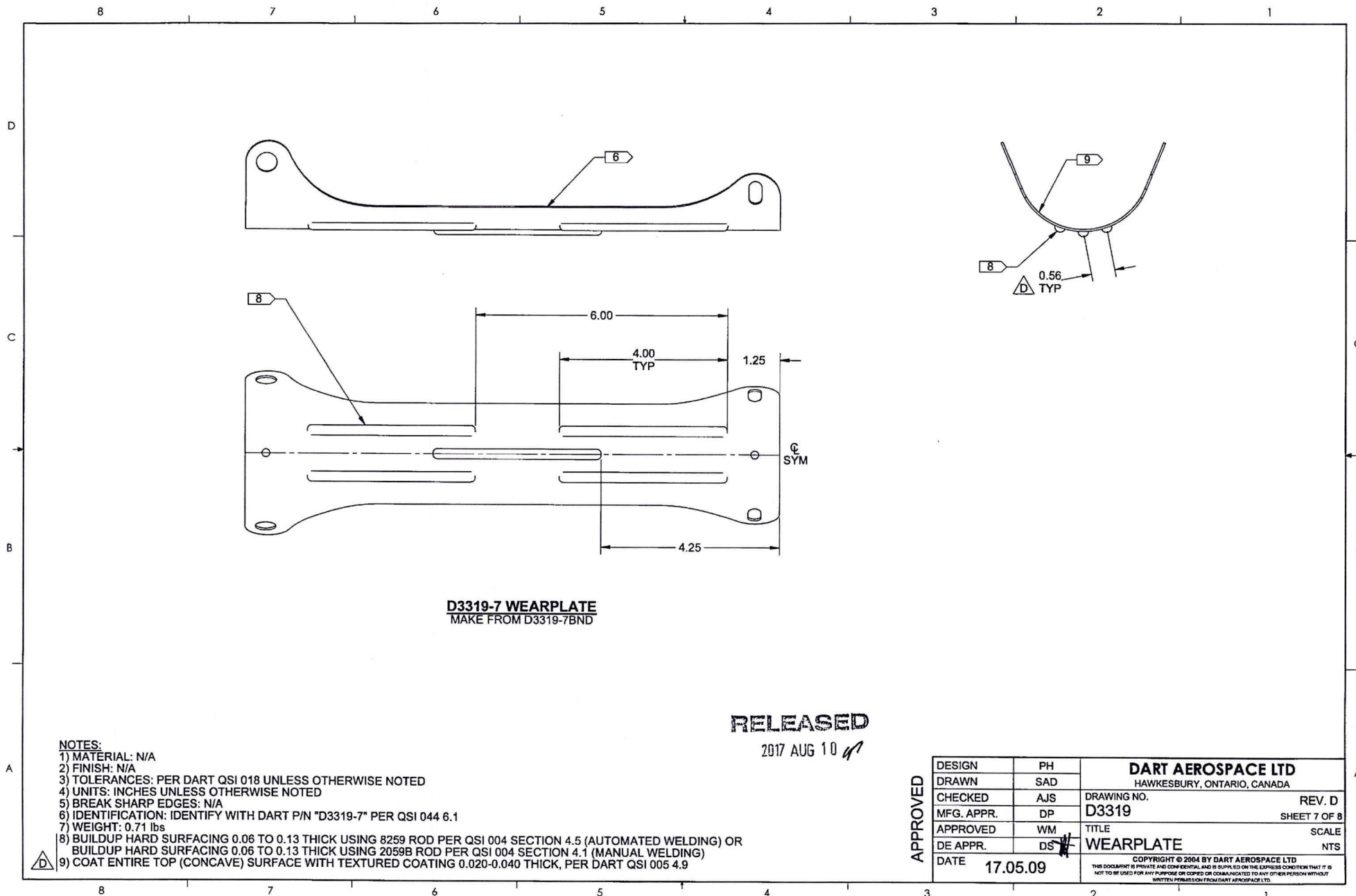
9) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING 0.020-0.040 THICK, PER DART QSI 005 4.9

RELEASED

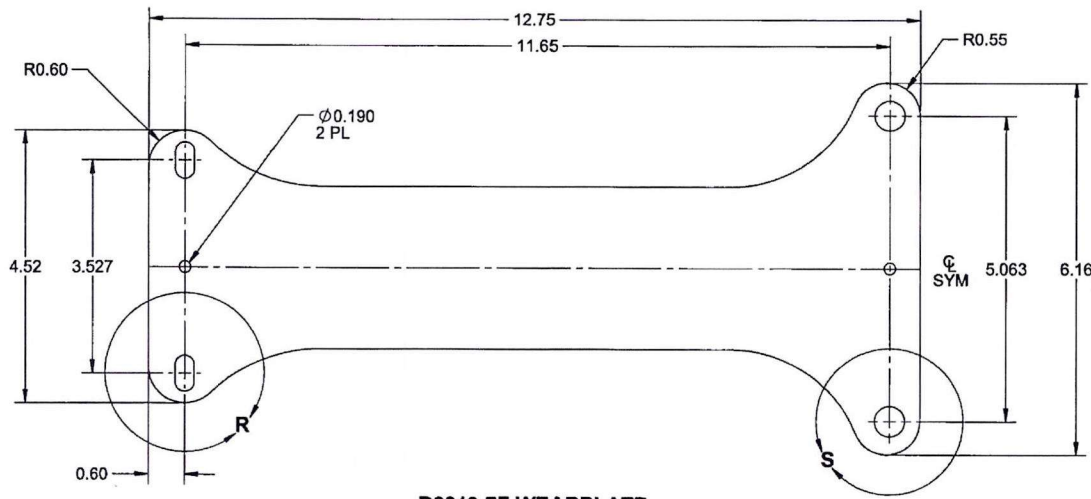
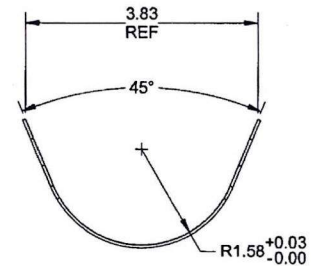
2017 AUG 10

APPROVED

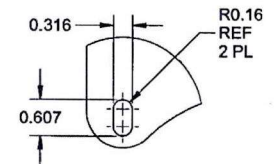
DESIGN	PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	SAD		
CHECKED	AJS	DRAWING NO.	REV. D
MFG. APPR.	DP	D3319	SHEET 6 OF 8
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	WEARPLATE	NTS
DATE	17.05.09	COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



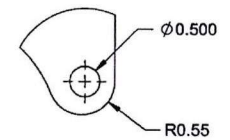
D3319-7BND WEARPLATE
MAKE FROM D3319-7F



D3319-7F WEARPLATE
FLAT PATTERN



DETAIL R
2 PL



DETAIL S
2 PL

RELEASED

2017 AUG 19

NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED, 18 GAUGE (0.048 THICK)
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR
ASTM A240 OR ASME SA240
REF DART SPEC M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.71 lbs
- 8) FOR NON-DIMENSIONED FEATURES, REFER TO CAD FILE D3319-7F-REV.D.XF

APPROVED

DESIGN	PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	SAD		
CHECKED	AJS	DRAWING NO.	REV. D
MFG. APPR.	DP	D3319	SHEET 8 OF 8
APPROVED	WM	TITLE	SCALE
DE APPR.	D9	WEARPLATE	NTS
DATE	17.05.09	COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Dart Aerospace Ltd.
1270 Aberdeen Street
Hamilton, ON K6A 1K7
CANADA

TEL: 1 519 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S147331

Part: D3319-1

Job No: 188873

Serial No/Batch: S147331

Revision: D

Inspector:

Exp Date:

Instructions: Various STC's

Date: 01/23/19